CLAIMS

1. An anti-CEA antibody ("806.077 Ab") comprising complementarity determining regions (CDRs) in which the CDRs comprise the following sequences:

a) heavy chain

CDR1 DNYMH (SEQ ID NO: 29)

CDR2 WIDPENGDTE YAPKFRG (SEQ ID NO: 31)

CDR3 LIYAGYLAMD Y(SEQ ID NO: 32); and

b) light chain

CDR1 SASSSVTYMH (SEQ ID NO: 26)

CDR2 STSNLAS (SEQ ID NO: 27)

CDR3 QQRSTYPLT (SEQ ID NO: 28).

2. An antibody according to claim 1 in which the heavy chain CDRs 1 and 3 are further defined as:

CDR1 FNIKDNYMH (SEQ ID NO: 30); and

CDR3 HVLIYAGYLAMDY (SEQ ID NO: 33).

3. An antibody according to claim 1 comprising the following, optionally humanised, structure:

a heavy chain variable region sequence (SEQ ID NO: 11)

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EVQLQQSGAE LVRSGASVKL SCTASGFNIK DNYMHWVKQR      40
PEQGLEWIAW IDPENGDTEY APKFRGKATL TADSSSNTAY      80
LHLSSLTSED TAVYYCHVLI YAGYLAMDYW GQGTSVAVSS      120
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and;

a light chain variable region sequence (SEQ ID NO: 9):

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DIELTQSPAI MSASPGEKVT ITCSASSSVT YMHWFQQKPG      40
TSPKLWIYST SNLASGVPAR FSGSGSGTSY SLTISRMEAE      80
DAATYYCQQR STYPLTFGAG TKLELKRA                   108.
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4. A humanised antibody according to claim 3 comprising at least one of the following sequences:

a heavy chain variable region sequence which is VH1 (SEQ ID NO: 55);

a light chain variable region sequence which is VK4 (SEQ ID NO: 71);
a human CH1 heavy chain IgG3 constant region;
a human kappa light chain CL region; and
a human IgG3 hinge region;
optionally in the form of a $F(ab')_2$ fragment.

5. A conjugate comprising an antibody according to any preceding claim and an effector moiety.

6. A conjugate according to claim 5 in which the effector moiety is selected from any one of the following:

a) an enzyme suitable for use in an ADEPT system;
b) CPG2;
c) [G251T,D253K]HCPB;
d) [A248S,G251T,D253K]HCPB;
e) a co-stimulatory molecule;
f) extracellular domain of B7;
g) extracellular domain of human B7.1; and
h) extracellular domain of human B7.2;

optionally in the form of a fusion protein.

7. A conjugate according to claim 6 which is a fusion protein selected from any one of the following conjugates, (sequences being listed in N terminus to C terminus direction):

a) a humanised 806.077 $F(ab')_2$ - $\{[A248S,G251T,D253K]HCPB\}_2$ fusion comprising:
an antibody Fd' chain of structure VH1(SEQ ID NO: 55)/CH1 constant region from IgG3/hinge region from IgG3;
the Fd' chain being fused via its C terminus to the N terminus of [A248S,G251T,D253K]HCPB; and
an antibody light chain of formula VK4(SEQ ID NO: 71)/CL region from kappa light chain;
b) $\{[A248S,G251T,D253K]HCPB\}_2$-humanised 806.077 $F(ab')_2$ fusion comprising:
[A248S,G251T,D253K]HCPB;

the HCPB being fused at its C terminus, via a $(GGGS)_3$ linker, to the N terminus of an antibody Fd' chain of structure VH1(SEQ ID NO: 55)/CH1 constant region from IgG3/hinge region from IgG3; and

an antibody light chain of formula VK4(SEQ ID NO: 71)/CL region from kappa light chain; and

c) a (human B7.1 extracellular domain)$_2$ - humanised 806.077 F(ab')$_2$ fusion comprising:

human B7.1 extracellular domain;

the B7.1 being fused at its C terminus to the N terminus of an antibody Fd' chain of structure VH1(SEQ ID NO: 55)/CH1 constant region from IgG3/hinge region from IgG3; and

an antibody light chain of structure VK4(SEQ ID NO: 71)/CL region from kappa light chain.

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8. A polynucleotide sequence capable of encoding a polypeptide of an antibody or a conjugate as defined in any preceding claim.

SUB A4

9. A vector comprising a polynucleotide as defined in claim 8.

10. A host cell transformed with a polynucleotide sequence as defined in claim 8 or a transgenic non-human animal or transgenic plant developed from the host cell.

11. Hybridoma 806.077 deposited as ECACC deposit no. 96022936.

12. A pharmaceutical composition comprising a conjugate as defined in any preceding claim in association with a pharmaceutically-acceptable diluent or carrier, optionally in a form suitable for intravenous administration.

13. A conjugate as described in any preceding claim for use as a medicament.

14. A method of making an antibody or a conjugate as defined in any preceding claim which comprises:

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a) subjecting a host cell, a transgenic non-human mammal or a transgenic plant as defined in claim 10, or the hybridoma of claim 11, to conditions conducive to expression, and

optionally secretion, of the antibody or conjugate; and optionally

b) at least partially purifying the antibody or conjugate.

15. A method of treatment of a human or animal in need of such treatment which comprises administration to a human or animal of a pharmaceutically effective amount of a conjugate as defined in any preceding claim.